In the Last 10-15 Years

On the "science side"

A push to develop common definitions and increased capability for doing ecosystem-based management

On the "policy & management side"

A push for agencies to move to outcome-based management and accountability reporting

Common Ground is Possible!

Science

Ecosystem Management is a structured process

for society to define what ecological condition is desired at each part of a region, and to develop and implement management policies designed to achieve that mosaic of desired sustainable ecological conditions.

[Harwell et al., 1999, BioScience 49(7)]

Policy & Mgmt

Outcome-based Management is a process whereby parks

define and map their management zones and Desired Conditions (DC's), identify associated measurement indicators/targets; and, take strategic steps to achieve and maintain DC's over time.

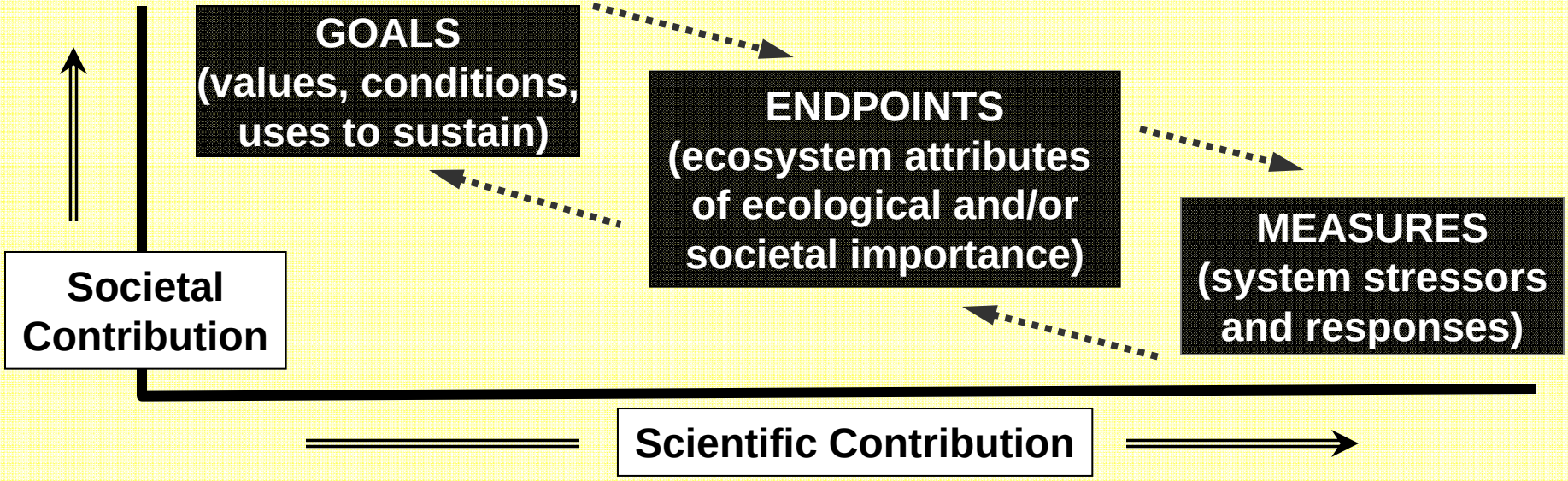
[Govt. Performance & Results Act, NPS Mgmt Policies, NPS Planning Guidelines]

Ecosystem-based Mgmt

Outcome-based Mgmt

Either way, taking a strategic approach to define, then achieve and maintain, a suite of Desired Conditions for park resources & values. Could describe it as

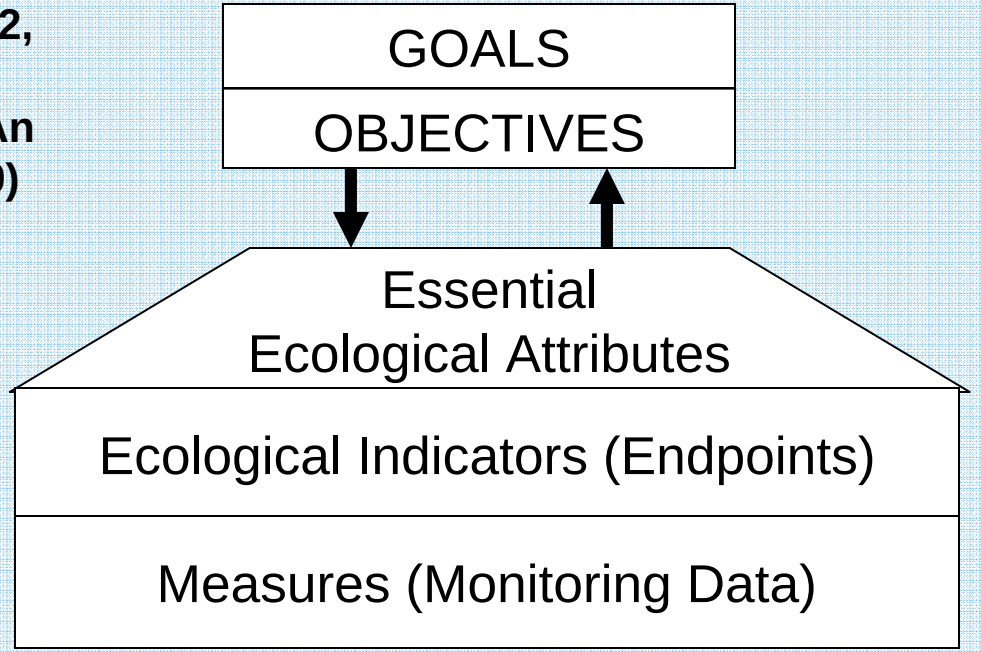
Condition-based Mgmt



After Harwell et al., 1999,"A Framework For an Ecosystem Report Card", BioScience 49(7)

From Young and Sanzone (eds.), 2002, "A Framework for Assessing and Reporting on Ecological Condition: An SAB Report" (EPA-SAB-EPEC-02-009)

EPA Science Advisory Board's Proposed Architecture for Assessing and Reporting on Ecological Condition



How This Might Look at the Park Level (Herbert Hoover NHS Example)

From "Herbert Hoover National Historic Site Resource Stewardship Strategy" (Draft Version - May, 2006)

NATURAL ZONE						
Fundamental Resources and Values	**Attributes**	**Beneficial Influences**	**Detrimental Influences**	**Indicators**	**Target (=Desired Condition)**	**Current Condition**
Serene and Simple Setting	Integrity & Physical Condition (cultural landscape) Acoustic Condition	Landscape design	Traffic Local land use	CLI Assessment	Good	Good
				FMSS Asset Condition	Good	Unknown
				Sound Conditions	dB < 3600	Unknown
Other Important Resources and Values	**Attributes**	**Beneficial Influences**	**Detrimental Influences**	**Indicators**	**Target (=Desired Condition)**	**Current Condition**
Reconstructed Prairie Plant Community	Plant Diversity Native Plant Dominance Wildlife Populations Diversity	Native volunteers Fire management	Disturbance Exotic invasion	Shannon Index	Native Plants > 2.63	1.51
				Invasive Plant Relative Cover	< 8%	11%
				Presence of Grassland Obligate Species	Species Breeding = 5	5
Stream and Riparian Community	Vegetation Erosion/Deposition Soil Water Quality Plant Community		Disturbance Local land use Exotic invasion	Proper Functioning Condition	Functioning	Nonfunctional
				State Water Quality Standards	IA Class A Standards = Met	Not Met
				Potential Plant Community	Present	Absent

Using Ecological Condition Assessments (WCA Program Assessments) to Integrate Science into Planning and Performance Reporting - Ideas

All parks with significant natural resources & values can benefit from an interdisciplinary evaluation of currently available scientific data and information…

To develop synthesis "information products" that are readily usable by park managers for:

A. **Resource Planning** – to help parks define & map their management zones and NR-related Desired Conditions

B. **Performance Reporting** – to help parks report to the GPRA "land health" goals and OMB "resource condition" scorecard

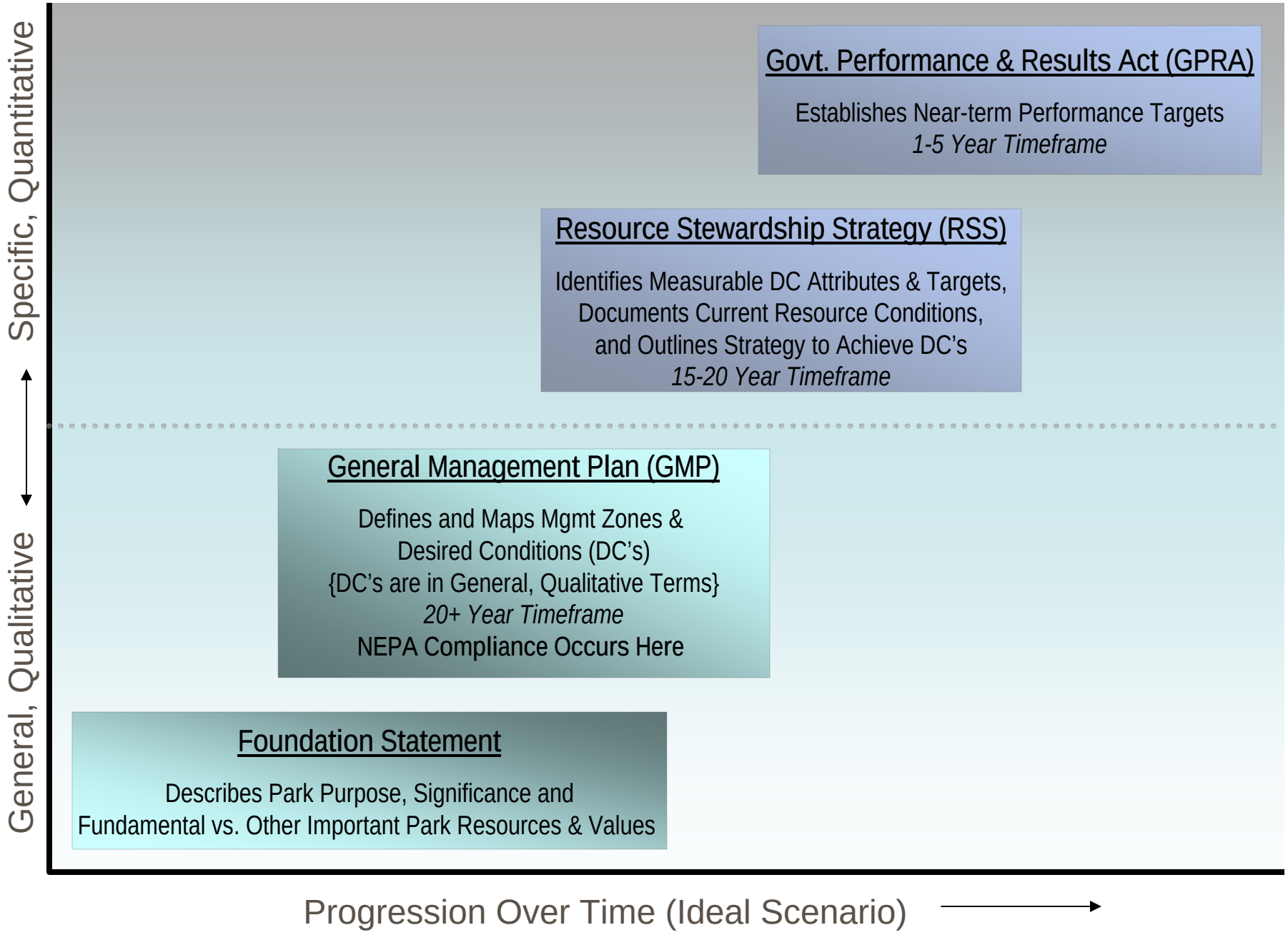
Three Key Elements to Making the Assessments Useful for Park Planning and Performance Reporting

1) **Build upon current park science & planning efforts –** seek to use data and information already assembled by NPS science-support programs, other science data developed in or near parks, existing planning decisions or mgmt documents.

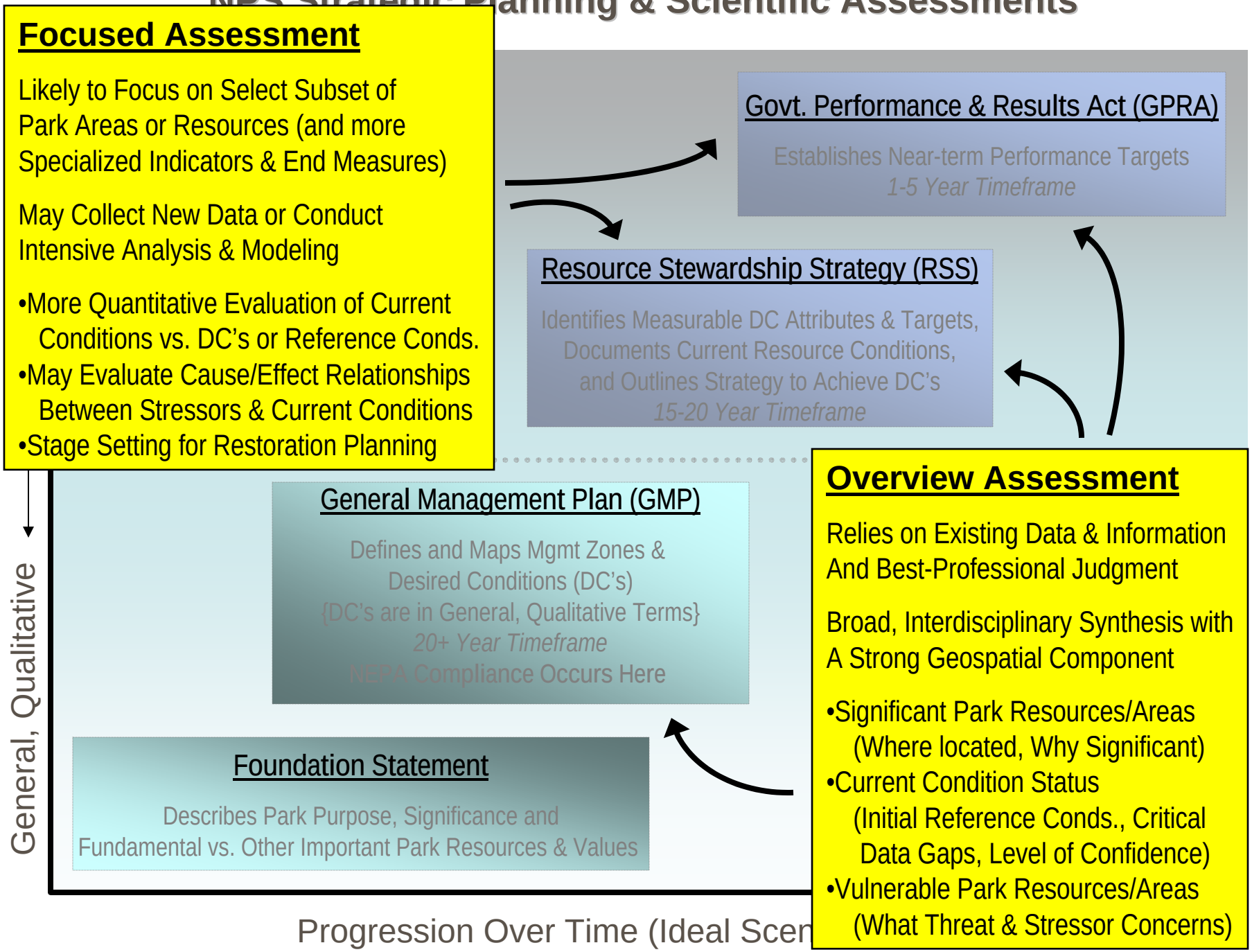
2) **Emphasize a strong geospatial component** – in terms of the analytical process, and resulting information products.

3) **Provide an initial set of science-based reference conditions (text and/or semi-quantitative)** – in a manner that can become more refined and quantitative over time, and help parks define Desired Conditions.

NPS Strategic Planning & Scientific Assessments



NPS Strategic Planning & Scientific Assessments



Outline of Analytical Framework

EPA-SAB framework

- what attributes, subcategories do we have useful, existing data for?
- Ranking of most important attributes, subcategories: where do top-20 VSM indicators fit, what does VSM conceptual model identify, what does park Significance Stmt say about impt resources & values

Decide on role and methods for each subcategory to be evaluated

- which will be part of characterizing important park resources (e.g. regional significance); which will be part of “condition assessment” phase
- For subcategories taken into the condition assessment phase: how will we define/apply reference condition
- Identify other data/analyses that could strengthen assessment, if these could be brought on line quickly

TNC CAP process (parts we will use) – what are the steps, what are the likely products